

SUBSTITUTE SPECIFICATION

ABSTRACT OF THE DISCLOSURE

In a method or apparatus for control of a point in time of a measurement of toner concentration in a developer mixture comprising toner and carrier, and wherein the developer mixture is mixed by a bucket roller provided with buckets, a toner concentration sensor is arranged for measurement of the toner concentration. Magnet bars are provided on the buckets, which magnet bars are interrupted in a region of the toner concentration sensor except for one of the magnet bars which is uninterrupted. The toner concentration sensor emits a sensor signal that exhibits a first pulse-shaped spike upon passage of the uninterrupted magnet bar and which has a larger amplitude compared to further pulse-spikes of smaller amplitude upon passage of the interrupted magnet bars. The sensor signal indicates the toner concentration between the pulse-shaped spikes. A point in time of occurrence of the first pulse-shaped spike is determined in the sensor signal and a measurement is implemented of the toner concentration in a measurement window that lies after occurrence of the first pulse-shaped spike. Also in a method or apparatus for control of a point in time of a measurement of toner concentration in the developer mixture, a bucket roller with buckets is provided. A toner concentration sensor is arranged adjacent to the bucket roller which emits a sensor signal indicating toner concentration. Pulse-shaped spikes are exhibited in the sensor signal upon passage of the buckets and the sensor signal indicates toner concentration between the pulse-shaped spikes. A magnet is arranged on a shaft of the bucket roller and a Hall sensor is arranged adjacent to the magnet. Measurement of the toner concentration is implemented controlled by a trigger signal from the Hall sensor in a measurement window that lies in a region of the sensor signal that lies between the spikes caused by the buckets.